

Appl. No. 09/924,016
Amdt. dated April 9, 2004
Reply to Office Action of March 18, 2004

REMARKS

Applicants respectfully request entry of this Response and reconsideration of this application. Claims 1-31 remain in the application. It is noted that the rejection of claims 1-23 under 35 USC 112, second paragraph, has been withdrawn. It is further noted that the rejection of claims 1-31 under 35 USC 102(b) as being anticipated by, or in the alternative, under 35 USC 103 (a) as obvious over U.S. Patent No. 5,324,493 to Mueller et al. (Mueller), has also been withdrawn.

The Examiner is thanked for the courteous interview extended to Applicants' representative, Lori Cuomo, on April 5, 2004 at which time the outstanding rejections based on WO 98/15496 (equivalent to U.S. Patent No. 6,334,994 to Wendelbo et al.) and U.S. Patent No. 6,294,493 to Strohmaier et al. (Strohmaier) were discussed. In particular, it was pointed out to the Examiner that Strohmaier does not teach at least one characteristic reflection peak in the 17.7 to 18.1 (2 θ) range in Figure 5. It was further pointed out to the Examiner that Examples 4 and 5 in WO 98/15496 were directed to single phase composition and not an intergrown phase of molecular sieves having AEI and CHA framework, as recited in Applicants claims.

Rejections Under 35 USC 102/103

Claims 1-31 have been rejected under 35 USC 102(e) as being anticipated by, or in the alternative, under 35 USC 103 (a) as obvious over WO 98/15496 (equivalent to U.S. Patent No. 6,334,994 to Wendelbo et al.) which teaches combining at least one part each of the aluminum and phosphorus sources in the absence of the silicon source. Applicants, on the other hand, obtain the reaction mixture by mixing reactive sources of silica, alumina, phosphorus and the organic structure directing agent. The reaction mixture chemistry in synthesis of crystalline materials is very important. The absence of a silicon reactant can affect the chemistry. An organic

Appl. No. 09/924,016
Amdt. dated April 9, 2004
Reply to Office Action of March 18, 2004

compound may or may not act as a crystal synthesis directing agent. A single directing agent might lead crystallization to multiple structures and a single structure may be directed by different directing agents.

Figures 3 and 5 of the present application (see also pages 4 and 20-21) show the difference in x-ray diffraction patterns between the silicoaluminophosphate, as taught by WO 98/15496, in comparison to the x-ray diffraction pattern of the silicoaluminophosphate of the present invention.

Applicants' claim 1 recites a reflection peak in the 17.7 to 18.1 (2 θ) range. There is no characteristic reflection peak in the 17.7 to 18.1 (2 θ) range in Examples 1 to 3 of WO 98/15406 or in the equivalent U.S. Patent No. 6,334,934. Note, independent claims 1, 5, 6 and 7 of U.S. Patent No. 6,334,934 claim no reflection peak in the 17.7 to 18.1 (2 θ) range.

Examples 1 to 3 of WO 98/15496 show synthesis of SAPO-18/SAPO-34 intergrowths. Examples 4 to 6 are comparative examples. Examples 4 and 5 are directed to pure phases, SAPO-18 and SAPO-34, respectively. There is no intergrown phase of molecular sieve having AEI and CHA structure, as recited in Applicants' claim 1.

Example 6 and the x-ray powder diffraction pattern characterized by the characteristic lines as indicated in Table 7 of WO 98/15496 are directed to a post-synthesis mixed phase sample, not an intergrowth. The synthesis steps in Example 6 are clearly not identical or substantially identical to Applicants' synthesis steps. In Example 6, one gram of SAPO-18 from Example 4 is mixed with one gram of SAPO-34 from Example 5, post synthesis, to form a physical mixture.

The data in columns 2 and 3 of Table 9 of WO 98/15406 clearly show no CHA component in Example 4 and no AEI component in Example 5. Column 6 represents the ratio of AEI/CHA calculated from the values in columns 2 and 3. The ratio of AEI/CHA is 0 for both Examples 4 and 5, as compared to an AEI/CHA ratio of from about 5/95 to 40/60, as recited in

Appl. No. 09/924,016
Amdt. dated April 9, 2004
Reply to Office Action of March 18, 2004

Applicants' claim 1.

Thus, the WO 98/15406 reference lacks the positive recitation required of an anticipating reference as well as any teaching of obviousness. In view of the above, withdrawal of the rejection is respectfully requested.

Claims 1-15 and 24-31 have been rejected under 35 USC 102(e) as being anticipated by, or in the alternative, under 35 USC 103 (a) as obvious over U.S. Patent No. 6,294,493 to Strohmaier et al. (Strohmaier) which teaches silicoaluminophosphates having an AEI structure and a high silica/alumina ratio. Examples 1-7 disclose the preparation of ECR-42 and Example 8 discloses preparation of SAPO-11. The silicoaluminophosphates of Strohmaier have a higher silica/alumina ratio than Applicants' silica/alumina ratio. See page 8 of the present application.

Claim 1 recites a reflection peak in the 17.7 to 18.1 (2 θ) range. There is no characteristic reflection peak in the 17.7 to 18.1 (2 θ) range in Strohmaier (See Figures 4 and 5 of Strohmaier).

The Examiner relies on Example 7 of Strohmaier to show a small reflection peak in the 17.7 to 18.1 (2 θ) range. Applicants have studied Figure 5, in particular Example 7, and see no peak in the 17.7 to 18.1 (2 θ) range, let alone a characteristic reflection peak. It appears the small peak, if a peak at all, the Examiner is referring to starts after 18.1(2 θ).

Thus, the reference lacks the positive recitation required of an anticipating reference or any teaching of obviousness. In view of the above, withdrawal of the rejection is respectfully requested.

None of the references relied on by the Examiner in the rejection of claims 1-31 under 102 (e), and/or 103 (a) either alone or in combination teach Applicants' invention as is now claimed. In view of the foregoing remarks, it is respectfully submitted that the present claims describe a silicoaluminophosphate molecular sieve which meets the requirements of

Appl. No. 09/924,016
Amdt. dated April 9, 2004
Reply to Office Action of March 18, 2004

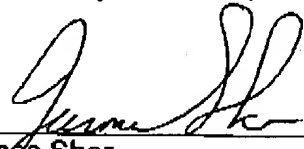
patentability. Applicants therefore respectfully request that a timely Notice of Allowance be issued in this case.

Any comments or questions concerning the application can be directed to the undersigned at the telephone number given below.

Respectfully submitted,

April 9, 2004

Date


Jaime S. Sher
Attorney for Applicant
Registration No. 34,726

POST OFFICE ADDRESS to which
correspondence is to be sent:

J. Sher, Esq.
ExxonMobil Chemical Company
LawTechnology Department
4500 Bayway Drive
P.O. Box 2149
Baytown, Texas 77522-2149
Phone No. (281)834-1298
Fax No. (281)834-2495